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7590 04/21/2004 MARGER JOHNSON & MCCOLLOM PC 1030 SW MORRISON STREET PORTLAND, OR 97205			EXAMINER	
			CALDWELL, ANDREW T	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Paper No(s)/Mail Date

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)

6) Other:

5) Notice of Informal Patent Application (PTO-152)

Art Unit: 2151

Page 2

1 2

2 Remarks

Claims 1-9 and 11-17 are pending.

5 Specification

The abstract of the disclosure is objected to under 37 C.F.R. 1.72(b) because (a) it does not describe the nature or gist of the claimed invention and (b) it is more than 150 words in length. The abstract does not describe the feature added to claim 5 in the response filed on February 12, 2003 (i.e., the determining if existing calls are below a predetermined usage threshold and the subsequent migration of those calls to other network access servers). Correction is required. See MPEP § 608.01(b).

13 Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s): (a) an access server having associated channels carrying incoming digital or analog traffic; (b) the determining if existing calls are below a predetermined usage threshold and the subsequent migration of those calls to other network access servers. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Page 3

Application/Control Number: 09/431,357

Art Unit: 2151

## 1 Oath/Declaration

This application presents a claim for subject matter not originally claimed or embraced in the statement of the invention. Neither the summary of the invention nor the originally filed claims mentioned: (a) the migration of existing calls to other network servers per claim 1; (b) a channel usage monitor determines if existing calls are below a predetermined usage threshold; (c) migrating to other network servers those existing calls below the usage threshold as determined by the channel usage monitor. A supplemental oath or declaration is required under 37 CFR 1.67. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02.

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al., U.S. Patent No. 5,933,490, in view of Fratto, M., More than Throughput:

Managed Modem Chassis, Network Computing, vol. 7, no. 17, pp. 1-5, Nov. 1996,

Page 4

Application/Control Number: 09/431,357

Art Unit: 2151

and further in view of Carson et al., U.S. Patent No. 4,629,832, and further in view of Service Provider Dial Scenarios and Configurations,

www.cisco.com/univercd/cc/td/doc/product/software/ios113ed/113ed/cr/dial\_c/dcprt0

/dcspex.pdf, pp. DC13 to DC56, January 1998, hereinafter "the Cisco Reference."

Regarding claims 8 and 11, they are rejected for the reasons given in the last Office action. The newly added limitation to claim 8 creates, through its use of the word "may," a situation where the migration of existing calls is optional. Existing calls may be migrated to other access servers but they do not have to be migrated. The Applicant clearly knows how to write a claim where migration is required, since claims 1, 13, 16, and 17 all make the migration of existing calls mandatory. The examiner has therefore presumed that this difference in claim language is intentional. In stating reasons for the rejection for this claim, the examiner chooses to apply a combination directed to the option where existing calls are not migrated.

Claims 1-4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al., U.S. Patent No. 5,933,490, in view of Fratto, M., More than Throughput: Managed Modem Chassis, Network Computing, vol. 7, no. 17, pp. 1-5, Nov. 1996, and further in view of Carson et al., U.S. Patent No. 4,629,832, and further in view of Service Provider Dial Scenarios and Configurations, www.cisco.com/univercd/cc/td/doc/product/software/ios113ed/113ed/cr/dial\_c/dcprt0/dcspex.pdf, pp. DC13 to DC56, January 1998, hereinafter "the Cisco Reference,"

Art Unit: 2151

and further in view of Hasler, J., Re: How to Establish a Semi-Permanent Dial-Up Connection?, lists.debian.org/debian-user/1998/debian-user-

199812/msg03897.html, pp. 1-2, December 31, 1998.

Regarding claim 1, the preamble will be given patentable weight since the claim body refers back to the preamble at line 6. See *the service request switch*. White teaches the invention substantially as claimed by disclosing an access server (Fig. 7 elems. 96 & 98) having associated channels (Fig. 7 elem. 94) carrying incoming digital or analog traffic (col. 15 lines 15-16), the access server being operatively coupled with a service request switch (Fig. 7 elem. 54; Col. 15 lines 13-35).

White does not teach the method steps listed in lines 4-12 of claim 1.

Fratto on the other hand teaches an access server with the ability to busy out all modems (i.e., associated channels) of a server when a system manager manually initiates preventive maintenance (p. 3 5th complete paragraph). Fratto therefore teaches the method step of a system manager manually determining whether off-line maintenance is needed on a network access server and, if so, suggests the general idea of busying out the modems/channels prior to taking the access server offline for maintenance. Fratto also teaches that network access servers, prior to peforming maintenance, disconnect, currently connected users (p. 2 disconnecting users prior to configuration upgrade).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fratto with the access server of

Art Unit: 2151

White because of Fratto's teaching that this capability is a *basic* modem management function (p. 3 5th complete paragraph).

The combination of White in view of Fratto does not teach the specific steps of busying out the system, which are:

Communicating a busy condition of any unused associated channel from the network access server to the service request switch;

Monitoring any used associated channel for either of a digital and an analog call thereon and waiting until the used associated channel becomes substantially unused as indicated by defined digital and analog signaling protocols comprehended by such monitoring, and migrating any existing calls other network access servers;

When the unused associated channel becomes substantially unused as indicated by such defined digital and analog signaling protocols comprehended by said monitoring, communicating a busy condition of such then-unused channel from the network access server to the service request switch;

Signaling that maintenance on the network access server can be performed;

Automatically routing any new client service requests that may arrive during a busy condition of the network access server to another network access server operatively coupled with the service request switch.

Carson on the other hand teaches a method for busying out the channels of a network device (Col. 10 line 56 to Col. 11 line 24), comprising:

Art Unit: 2151

Communicating a busy condition of any unused associated channel from the network device to the service request switch (Col. 10 lines 57-61);

Monitoring any used associated channel for either of a digital and an analog call thereon and waiting until the used associated channel becomes substantially unused as indicated by defined digital and analog signaling protocols comprehended by such monitoring (Col. 11 lines 9-12; Fig. 5 loop between elem. 511 no path and elem. 520 no path shows the system looping or waiting until the CO line is idle);

When the unused associated channel becomes substantially unused as indicated by such defined digital and analog signaling protocols comprehended by said monitoring, communicating a busy condition of such then-unused channel from the network access server to the service request switch (Fig. 5 elems. 510-513; Col. 10 line 56 to Col. 11 line 16);

Signaling that maintenance on the network device can be performed (Col. 11 lines 12-16 audible alert).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of White in view of Fratto by substituting Carson's specific teachings for busying out a network device for the combination's general teaching of busying out the network access server, thereby teaching the invention as claimed. This combination would have been obvious because of Carson's teaching that its method reduces interruptions to users of the system (Col. 1 lines 19-24).

Art Unit: 2151

The combination of White in view of Fratto and further in view of Carson does not teach a method wherein new client service requests that may arrive during a busy condition of the network access server are automatically routed to another network access server operatively coupled with the service request switch and migrating any existing calls other network access servers.

The Cisco reference on the other hand teaches a system wherein the channels of a hunt group are allocated across multiple access servers (p. DC-28 Fig. 13; pp. DC-45 to DC-46 describing the purpose of a hunt group).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to spread the channels of the hunt group of the combination of White in view of Fratto and further in view of Carson as taught by the Cisco reference because doing so would increase the reliability of the system. In such a system, any new client service requests that may arrive during a busy condition of the network access server are automatically routed another network access server operatively coupled with the service request switch.

The combination of White in view of Fratto I and further in view of Carson and further in view of the Cisco Reference therefore teaches all features of the claimed invention except for the step of migrating any existing calls other network access servers.

As to the limitation of migrating any existing calls to other network access servers, the combination of White in view of Fratto and further in view of Carson and further in view of the Cisco Reference teaches that any connected users that are

Art Unit: 2151

currently connected will be disconnected prior to performing maintenance. See the discussion of Fratto above. So the combination of White in view of Fratto and further in view of Carson and further in view of the Cisco Reference teaches a method wherein connections that do not eventually terminate at the client/user's initiative are eventually disconnected.

Hasler on the other hand teaches a system for generating a semi-permanent dial up connection that will automatically dial up a user's ISP and reestablish the connection if the line goes down (pp. 1-2). Hasler therefore teaches that some users remain semi-permanently connected to their ISP.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hasler's teaching regarding a semi-permanent dial up connection with the client of White. This combination would have been obvious because it eliminates the user having to manually initiate the connection (Hasler p. 1). In the resulting combination, the remote access server would terminate the semi-permanent connection when it initiates maintenance. The client would reestablish the semi-permanent dial up connection by dialing the hunt group, and the connection would be automatically routed to an available remote access server in the hunt group. The combination therefore teaches a method that migrates any existing calls other network access servers.

Regarding claim 2, the combination of White in view of Fratto and further in view of Carson and further in view of the Cisco Reference and further in view of Hasler teaches the invention substantially as claimed. See the rejection of claim 1 above.

Page 10

Application/Control Number: 09/431,357

Art Unit: 2151

The combination as applied to claim 1 above does not teach the additional step of claim 2. Carson on the other hand teaches a method, which after completion of the maintenance, further comprises communicating an idle condition of any associated channel to the service request switch (Col. 1 lines 51-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Carson's teaching regarding returning the state of the channels to idle after completing maintenance with the method of the combination of White in view of Fratto and further in view of Carson and further in view of the Cisco Reference and further in view of Hasler because returning the channels to the idle state allows the network access server to receive calls again, and thereby perform its intended function.

Regarding claim 3, the combination of White in view of Fratto and further in view of Carson and further in view of the Cisco Reference and further in view of Hasler, as applied to claim 2 above, teaches the invention substantially as claimed. The combination of White in view of Fratto and further in view of Carson and further in view of the Cisco Reference and further in view of Hasler does not explicitly teach the additional limitation of claim 3. White does however teach that the central office switching system is connected to the access server via POTS or plain old telephone service connections (Col. 15 lines 13-16). Official notice is hereby taken of the fact that POTS connections use a standard signaling protocol to communicate the status of associated channels. White therefore teaches a system in which a standard communication protocol is used to communicate between the network access server

Art Unit: 2151

Page 11

and the service request switch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the standard signaling protocol to communicate the busy/idle condition of any associated channel of the network access server to the switch because doing so increases the interoperability of the network access server, allowing it to be connected to the switches of different manufacturers.

Regarding claim 4, the combination of White in view of Fratto and further in view of Carson and further in view of the Cisco Reference and further in view of Hasler as applied to claim 1 above teaches a system in which both network access servers are in the same hunt group. See the discussion of the Cisco Reference above.

Regarding claims 16, it is a computer-readable medium claim corresponding to method claim 1. Since it does not teach or define above the information in the corresponding method claim, it is rejected under the same basis.

Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over White in view of Fratto and further in view of Carson, and further in view of the Cisco Reference, and further in view of Fratto, M., Accessing the Enterprise: Large-Scale RAS to the Rescue, Network Computing, pp 1-8, April, 1999, hereinafter Fratto II, for the reasons given in the last Office action.

Art Unit: 2151

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Claims 5-7, 13-15, and 17 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: As to claim 5, the prior art of record does not teach or suggest a combination as claimed in which a channel usage monitor determines if existing calls are below a predetermined usage threshold and wherein existing calls below the usage threshold will be migrated to other network servers. Fratto II on page 5 describes how the Shiva Corp. LanRover Access Switch handles firmware upgrades. Prior to initiating a firmware upgrade, the modems may be busied out. However, once the firmware upgrade process is initiated, all existing connections are dropped, regardless of whether the connection is currently being used. Nothing in Fratto II suggests that only existing calls below a usage threshold are migrated (i.e., their connections dropped so the user is forced to redial and access another access server in the hunt group). By not migrating calls above the usage threshold, a system according to the claimed invention distinguishes between connections where the user is lingering (i.e., remaining connected but not using the network) and those connections that are actively used. As to claims 13 and 17, they all contain a language directed to the same feature and are therefore allowed for the same reason. As to any claim not specifically discussed, it is allowed because it depends on one of the claims discussed above.

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## Response to Arguments

Applicant's arguments filed on February 12, 2004 (paper no. 13) have been fully considered but they are not persuasive.

Art Unit: 2151

As to the rejection of claim 1, the Applicant is arguing in substance that the combination of White in view of Fratto I, Carson, and the Cisco Reference does not teach: (a) the step of monitoring of both analog and digital calls according to their respective protocols; (b) the step of automatically routing new calls to another network access server in the hunt group; (c) the step of migrating calls to other network access servers in order to busy out an active line with no interruption of service to the user.

As to point (a), claim 1 does not include the limitation of monitoring both analog and digital calls according to their respective protocols. The step of monitoring in claim 1 cites digital and analog calls as alternatives, by its use of the word "either." Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, the assignee's own product, the Cisco AS5200, teaches that a network access server accepting both analog and digital ISDN calls is known in the art (Cisco reference p. DC-18).

As to point (b), the Applicant argues that the combination does not teach the step of automatically routing new calls to another network access server in the hunt group. This argument about the meaning of a hunt group shown in Figure 13 on page DC-28 ignores what the assignee's own reference teaches about the purpose of hunt groups. The Cisco Reference teaches that a hunt group number is the only number that clients dial into (p. DC-46). When a call is received, the telco switch searches for or hunts for the first available channel on any of the attached network access servers (p. DC-46 and Fig. 16 on p. DC-45). So in the combination of White in view of Fratto, Carson, and the

Art Unit: 2151

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1 Cisco Reference, a network access server undergoing maintenance would have all lines

2 busy, since they would either be connected to a user or busied out. The telco switch in

the combination would therefore route the call to another access server in the hunt

4 group in which one of the lines is not busy. The Applicant then argues that the

5 combination could result in a situation where an incoming call is given a busy signal.

6 While the examiner concedes that this situation could occur when all lines to all access

servers in a hunt group are busy, the examiner argues that combination also teaches a

combination in which all lines to all servers are not busy.

As to point (c), the Applicant is arguing a limitation that does not appear in the claim language. The claims say nothing about migrating a call with no interruption of the service to the user. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Applicants also argues with respect to claim 1 that Carson teaches away from the claimed invention because it suggests that outside callers will receive a busy signal and try again later, as opposed to having their call directed to another server in a hunt group. This argument is not deemed persuasive. Carson is relied upon for its teachings regarding the details of busying out of telephone lines. Carson is not relied upon for any teachings regarding the distribution of calls across network access servers in a hunt group, since Carson addresses the problem of maintaining a *single* system. Since Fratto I explicitly teaches the busying out of telephone lines and Carson is relied

Art Unit: 2151

1 upon for teaching the details as to how this is carried out, the examiner concludes that

Page 15

2 Carson does not teach away.

As to independent claims 8 and 16, the Applicant's arguments are the same as those addressed above.

As to the rejection of claims 9 and 12, the Applicant is arguing in substance that the combination of White in view of Fratto I, Carson, the Cisco Reference, and Fratto II does not teach an automatic scheduler. See the Applicant's arguments at the bottom of page 12 of the response. The examiner disagrees with the Applicant's characterization of Fratto II. Fratto II use of the term scheduler suggests that it is a "thing." The examiner reasonably inferred that this thing referred to as a scheduler by Fratto II is known in the art. This conclusion is consistent with the Applicant's failure to disclose any details of a scheduler in this application. When viewed in this context, it is clear that Fratto II's statement suggests that one can either have personnel on hand to perform maintenance or have the scheduler perform the maintenance. If the scheduler performs the maintenance, it is without user intervention and therefore automatic.

17 Conclusion

A shortened statutory period for response to this action is set to expire **three months** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Caldwell, whose telephone number is (703) 306-3036. The examiner can normally be reached on M-F from 9:00 a.m. to 5:30 p.m. EST.

Art Unit: 2151

If attempts to reach the examiner by phone fail, the examiner's supervisor, Glenton Burgess, can be reached at (703) 305-4792. Additionally, the fax numbers for Group 2100 are as follows:

Page 16

Fax Responses:

Clindrew Galaleva

(703) 872-9306

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 305-9600.

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**Andrew Caldwell** 

16 703-306-3036

17 April 17, 2004